

a guide to

DENTAL CARE

EPSDT • MEDICAID



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in cooperation with

**The American Society of Dentistry for Children
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A GUIDE TO DENTAL CARE

for the

Early and Periodic Screening, Diagnosis, and
Treatment Program (EPSDT)

under

M E D I C A I D

by

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PREFACE

Although much can be done to prevent dental disease in children, it can never be eliminated entirely. Therefore, it is important that every child receive regular periodic dental care from early childhood through the teens. Unfortunately, probably only about 20 percent of the Nation's children receive optimum professional dental care. There are many reasons for this, but for many, an important barrier has been the lack of money.

The advent of the Early and Periodic Screening, Diagnosis, and Treatment Program (EPSDT) under Medicaid has meant that about fourteen million needy children and youth under 21 will have financial barriers to receiving dental care removed or at least substantially eased. It is a significant landmark in improving the health of the Nation.

This Guide has been prepared in an effort to assist those who will be primarily involved in implementing the dental care component of EPSDT to tailor their developing plans to most effectively and efficiently meet the dental care needs of needy children in the various States. The authors of the Guide have drawn heavily on the expertise of the Joint Committee on Dental Care Programs of the American Academy of Pedodontics and the American Society of Dentistry for Children; the members of this Committee are listed in the Appendix.

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INTRODUCTION

The Enlarging Mission of Public Welfare

Public assistance was initially conceived primarily to meet the maintenance needs of certain categories of individuals created by the lack of funds to meet the essential requirements for living. Under public assistance titles of the Social Security Act passed in 1935, federal funds were first made available to assist states in providing money payments according to specified formulas for mothers and their dependent children, the aged, the blind, and the totally and permanently disabled.

In the early 60's the Kerr-Mills Act added medical care for the needy aged. This precedent was followed by the much more sweeping provisions of Title XIX (Medicaid) of the 1965 Amendments to the Social Security Act. This amendment provided that all recipients of categorical assistance were to receive basic health services with the payments being made directly to the providers of the service (vendors). At this time dental care was not included among the services that had to be provided to categorical public assistance recipients; it was an optional service which could be offered by the states. One of the requirements was that if a particular health service was offered to any segment of the eligible recipients it had to be provided to all. It was the intent of Congress to help states pay for health care for eligible people and to provide the services to help people become more self-sufficient and better able to lead normal and productive lives.

Provision for early identification and treatment of physical and mental defects in children was included in amendments passed in 1969 which required early and periodic screening,

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diagnosis, and treatment (EPSDT)* for all Medicaid eligibles under the age of 21. The services covered could be limited to those already included within the state plan except for hearing, vision, and dental care which were required services. The clear intent of the Congress that such services were to be available to all eligible children is indicated by the fact that in 1972 the Congress passed additional amendments which imposed a penalty for those states that did not implement the EPSDT program.

As far as dentistry is concerned, these two legislative actions made important changes in Medicaid: 1) dental care could be offered to children even if it was not offered to the other categories of public welfare assistance--the aged, blind, and disabled, and 2) dental treatment of children was no longer an optional service but the states were mandated to provide "...dental care as is necessary for relief of pain and infection and restoration of teeth and maintenance of dental health..." and would be penalized by a reduction in federal funds if these services were not offered.

Dentistry in a Total Health Care Program

There are important differences between the characteristics of medical and dental disease and between the problems involved in providing treatment. However, these differences should not obscure the fact that dentistry should be an integrated part of the total approach to the prevention of disease and disability and the provision of remedial treatment with the ultimate objective being total health for the child. The vast majority of infectious diseases can, and are, being prevented by measures which either require no intervention by the physician or his aides or involve a very limited amount of professional time. Except for water fluoridation, methods such as environmental control and immunization are not now available for the prevention of dental diseases. Other medical problems occur relatively infrequently so that the traditional methods of "screening" are necessary in order to identify the children who need extended professional care. Just the opposite is true of the dental problems of children.

*For brevity the letters EPSDT will be used hereafter to designate "early and periodic screening, diagnosis, and treatment."

Dental Needs. Among the major factors which influence the requirements for adequate treatment of children are the characteristics of dental diseases themselves. The most common dental problem in childhood, dental decay, affects most children early in life--soon after the age of three (and even earlier in non-fluoridated communities) when the primary teeth have recently made their appearance in the mouth. By the end of the first decade almost all children will have incurred dental caries and some of them will have experienced diseases of the supporting tissues (periodontal disease) by this time. Dental programs, therefore, must cope with diseases which involve almost the entire population rather than a limited segment. In a subsequent section it will be pointed out that the almost total prevalence of dental diseases means that the traditional approach to screening as applied to medical conditions may not be or frequently may not be appropriate for dental problems. The early occurrence of dental disease in almost the entire child population is compounded by the fact that dental caries continuously recur within relatively brief periods of time. Follow-up and "rescreening" therefore become of critical importance to the development of an adequate dental care program.

The EPSDT program, including as it does children from birth to the age of 21, presents a variety of problems in patient management. Some children will experience dental decay as early as two to three years of age and in a few instances even earlier (the so-called nursing-bottle-mouth in which there are a number of large areas of decay so extensive as to cause pulpal death leading to abscesses). Because of the nature of the tooth destruction and the very young age, these children require dental services by those with exceptional training and experience in patient management.

Many of the Medicaid-eligible children will require services no different than the patients routinely seen in the dental practice. The treatment of adolescents may involve special problems of management, since they have reached the age of independent decision-making and should be in a position actively to participate in preventive measures, the keeping of appointments, and the receipt of care. The dental problems of the adolescent will often be compounded by the failure to have received care when needed at an earlier age. Dental defects do not resolve without treatment; therefore these young people may suffer the accumulated needs of ten years, or more, and the complications

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resulting from this neglect. Dental cavities are most common in the period through early adolescence. Periodontal diseases (diseases of the gums and the bones supporting the teeth) start in adolescence and, unless checked, become progressively more serious with age. Since dental disease rarely corrects itself, but rather becomes more difficult to manage, treatment early in the course of the disease will nearly always be easier, less expensive, and more successful than treatment begun at a later time.

For the program administrator, one of the striking characteristics of providing dental care is that it is necessary for almost every beneficiary eligible for care, and it may be anticipated that it will be a relatively costly part of the total health program.

Early identification of children eligible for care and systematic recall of these children periodically for reevaluation should have a high priority in program operations. These two factors will also help to contain costs since neglected disease is usually more expensive, as well as more difficult, to correct. In all probability costs for care of all eligible children under 21 will drop after the program has been totally implemented; most children first enrolled in the program will have had neglected dental needs. The initial round of treatment is much higher than the cost of treating children on a maintenance basis for disease that has occurred over a short time--such as six months to a year since they have previously seen a dentist and have been treated.

Another important distinguishing characteristic of a dental program is that it involves an almost totally separate and autonomous health care delivery system--that of the dental profession. The ultimate objective should be an integrated program to meet the total health needs of the child but in all probability an integrated administrative system will not be workable, since it will be necessary to have separate administrative approaches to the identification of the providers of dental care, to methods of referral, and to methods of setting levels of reimbursement. Record keeping systems, claim forms and billing procedures will need to be examined carefully to be sure that they are appropriate for use in the provision of dental care.

Purpose of Guide

This Guide has been developed to assist administrators, providers of dental care and others involved in carrying out the dental care provisions of the EPSDT program under Title XIX. It is intended to assist in the development of programs rationally tailored to the unique characteristics of dental diseases and of the dental care delivery system. The methods of "screening" appropriate for dental diseases are considered at some length and the differentiation made between screening and the professional diagnosis of disease which leads to the provision of treatment. Priorities are given as well as a listing of services to define what should be included in an adequate program for the maintenance of oral health. Methods of monitoring the operation of the program are also outlined, including methods of evaluating the appropriateness and adequacy of dental treatment being received by the Medicaid-eligible recipients. The administrative mechanisms reviewed include the involvement of organized professional groups and lay people in the development and administration of the program. The appendices contain supporting documents which provide detailed information about selected aspects of a dental program under EPSDT.

ORGANIZATION OF EPSDT PROGRAM

Medicaid, authorized by Title XIX of the Social Security Act, is a federal-state grant-in-aid program designed to share the cost of providing health care to certain low-income persons. Each state determines the eligibility of recipients according to its own definition of need.

EPSDT is a service to be made available to eligible children under Medicaid, and states have responsibility for assuring its day-to-day implementation. The state Title XIX agency either contracts with the State Health Department to provide the necessary services, or negotiates contracts with private practitioners, clinic, hospitals, or other provider groups to arrange for provision of necessary services.

At the federal level primary responsibility for the EPSDT program is with the Medical Services Administration of the Social and Rehabilitation Service. Coordinating efforts have been initiated with Community Services Administration, the Office of Child Development, and the health programs of HEW (for example, Maternal and Child Health). Contracts for technical assistance have been let by Medical Services Administration and Health Services Administration with the American Academy of Pediatrics for the preparation of guides for the use of physicians, nurses, paramedical personnel and others who participate in the screening, diagnosis, and treatment phases of the program.

A financial penalty will be imposed on those states which fail to implement the EPSDT provisions, including, for example:

- a) informing eligible families with children about the availability of resources for EPSDT; b) helping eligible families receive screening services; and c) identifying and making arrangements with health care providers to assure the availability of corrective treatment.

SCREENING FOR DENTAL DISEASE

Purpose

The traditional purpose of screening for medical problems is to identify children who need more definitive diagnosis and possible follow-through treatment. This is not the purpose of dental screening, since it can be easily predicted that almost all children will need definitive dental diagnostic procedures and remedial treatment. Except for very young children the purpose of dental screening is: 1) initially, to assure access to care by referring eligible children for definitive diagnosis and treatment; 2) to establish a permanent dental record showing treatment needed and received; and 3) at the appropriate interval to periodically refer children back to the dentist for reevaluation and treatment of new defects.

It is, therefore, essential to develop methods for gaining access for all eligible children to the dental care delivery system and to develop methods and procedures by which these children can be maintained under continuous professional supervision as long as they are eligible for service. To accomplish this goal will require new and imaginative administrative mechanisms, as well as developing methods to assure that children can receive appointments at appropriate times, and that they have transportation to get to where dental treatment can be provided, and methods of involving the family in the process concomitantly with educating them to proper oral health habits and the necessity for regular dental care.

Criteria for Referral

The ultimate determination of the criteria for referral should be made in close cooperation with the dentists who will be

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providing the services for children. These criteria will vary from area to area according to the common pattern of practice and the professional background of the dentists involved. In all cases this is a professional judgment and should reflect the consensus of those who will provide the services. For this reason the judgments can best be made at the local (city or county) level in cooperation with program administrators.

Some general guidelines for the criteria for referral are suggested. For this purpose, the child might be considered to fall into one of three categories: those children without teeth; children in the period when the teeth are coming into the mouth and immediate post-eruption; and children with full dentition. The newborn, of course, does not have teeth and will not have for some months and therefore is ordinarily not seen by a dentist except in the relatively rare cases of congenital deformities (such as cleft palate), burns, or trauma. From the time of eruption until about three or four years of age, the child may not need dental care because the teeth are newly erupted into the mouth and have not yet had time to be attacked by the processes of dental disease. (The age of three to five is selected arbitrarily but should be determined at the local level, considering both local custom, and the fluoride content of the water.) During these two periods of the child's early life, referrals may be made on the basis of determinations established by physicians and auxiliary medical personnel on the basis of their judgment of need for diagnosis and treatment by a dentist.

After this period the nature of screening changes, since ideally all children should be sent to a dentist initially for diagnosis and examination and periodically thereafter. During this remaining long period of the life of the child under 21, the criteria for referral depend on a health history of the child which may be taken either by medical personnel or clerical personnel. The first determination is whether or not the child has been seen by a dentist initially. Subsequently, criteria should be established (preferably at the local level) as to how frequently a child should be reexamined by a dentist. If it is determined by questioning the parent or the child that the child has not visited a dentist's office within a stated number of months (such as six or nine), then the referral to a dentist should be automatic.

In areas where shortage of funds or manpower preclude offering comprehensive dental care, priority should be given to emergency and preventive services which are defined in a later section.

Screening Personnel and Methods

Screening for dental defects should be part of total health screening and the personnel should be those involved with the overall responsibility for screening for health defects. As indicated by the previous section the screening personnel may vary with the age of the child. In the younger years this should be done by trained health personnel such as physicians or nurses. Preferably they should have the opportunity to meet with the dentists in a community to discuss the evidences of dental decay and the response in terms of referral that they should make to these specific conditions. After the age of approximately five, the screening becomes a routine procedure which can be accomplished by total health screening personnel to assure that appropriate referral is made to a dentist.

Although a full diagnosis of the presence, extent, and nature of dental disease is a time-consuming and relatively expensive process, screening for dental disease should involve relatively little time. In the early years medical personnel should be able to examine the oral cavity in about five minutes or less. In older children the time involved in questioning the child and parent about the length of time since the child last saw a dentist should require even less time, although the arrangements for referral may be quite time-consuming requiring consideration of the choice of a dentist, the arrangements for transportation, the babysitting for other children while the mother is taking the child to the dentist, and other variables.

Children to be Screened

In the initial phases of EPSDT the objective should be to screen all eligible children. Subsequent screening of the children will consider the length of time since they have

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last seen a dentist for diagnosis and treatment. Monitoring the success of the screening program requires knowledge of the number of eligible children and the number of children that have been initially screened, as well as the number who are under periodic supervision by a dentist. In all probability new record keeping systems will need to be developed (in many states involving the use of a computer) to maintain a current roster of children eligible and to identify the interval since each has been to the office of a dentist. This system should include a "flagging" mechanism to identify children who have not returned for dental care within an appropriate period so that special efforts can be made to contact each child's family, arrange return for a dental examination, the establishment of a new diagnosis, and the completion of the necessary treatment.

DIAGNOSIS AND TREATMENT OF DENTAL DISEASE

Professional Personnel

Owing to the fact that virtually all of the eligible population will require dental services, each child referred for dental care will require differential diagnosis of his problems to identify anomalies, diseases and other significant deviations from normal. Services necessary for the preservation of the dentition and supporting structures should be provided through the age of 21. The diagnosis and treatment must be the responsibility of legally qualified dental practitioners and their auxiliary personnel. The provision of diagnostic services without follow-up treatment services is a poor use of funds and therefore the two should be linked together.

If a significant improvement of oral health is to be achieved, it will require the utilization of the resources of the general practitioners who comprise some eighty-five percent of practicing dentists. Their participation in the program will be enhanced by cooperative arrangements between the program administrators and the providers. Pedodontists (those who specialize in dentistry for children) are needed both to provide services for children with special needs and to help absorb the increased demand for dental care. Dentists in general and limited practices will need to utilize auxiliaries in both conventional and expanded roles in order to achieve these objectives. The role of auxiliaries is defined by the dental practice act of each state. These practice acts have been changed in a number of states (and are in the process of change in other) to encourage the delegation of additional duties to trained dental auxiliaries, thus allowing the dentist to see more patients. Medicaid administrators should maintain liaison with the practicing profession.

Priorities for Treatment

While recognizing the almost universal need for treatment, it is realistic to recognize there may be limited resources in the initial phases of the program. This limitation may make it important to establish priorities for oral health programs. As a minimum, the dental services that must be provided include emergency services, preventive services, and therapeutic services for dental disease which, if left untreated, may become acute dental problems or may cause irreversible damage to the teeth or supporting structures. Other therapeutic services for dental disease should be provided as rapidly as the availability of resources permits. Dental services include:

- a. Emergency Services: Emergency dental care services are those necessary to control bleeding, relieve pain, eliminate acute infection; operative procedures which are required to prevent pulpal death and the imminent loss of teeth; treatment of injuries to the teeth or supporting structures (e.g. bone or soft tissues contiguous to the teeth); and palliative therapy for pericoronitis associated with impacted teeth.
- b. Preventive Services: Preventive dental services include:
 1. Instruction in self-care oral hygiene procedures (provided individually or in groups).
 2. Oral prophylaxis (cleaning of teeth), necessary as a precursor to the application of dental caries preventives in areas where such applications are indicated (provided in groups or individually).
 3. Oral prophylaxis independent of the application of caries preventives for patients 10 years of age or older.
- c. Therapeutic Services: Therapeutic services include:
 1. Pulp therapy for permanent and primary teeth.
 2. Restoration of carious (decayed) permanent and primary teeth with silver amalgam, silicate cement, plastic materials and stainless steel crowns.

3. Scaling and curettage.
4. Maintenance of space for posterior primary teeth lost prematurely.
5. Provision of prosthesis when masticatory function is impaired, or when existing prosthesis is unserviceable, or in instances when esthetic considerations interfere with employment or social development.

For additional information on diagnostic and treatment services, refer to the Appendix, page 37 (Recommended Standards).

Special Administrative Problems

The majority of dental care is provided in private dental offices rather than hospitals or other central facilities. It also usually involves a multiple series of appointments for completion of the treatment. These characteristics of the dental care delivery system create special problems. Experience has shown that some of these problems are particularly acute in low-income groups.

Transportation has proved to be an almost universal hurdle. Needy families often do not have cars and may either have to rely on neighbors (who may not be reliable) or an inadequate public transportation system. If public transport must be used, it is not uncommon for a parent to have to consume a half day to keep a 30 to 60-minute appointment with the dentist. This can become a major barrier when a parent either must miss work in order to take the child to the dental office or must find someone to take care of younger children who would be left at home. In many settings, the use of indigenous personnel to serve as intermediaries between the program and the recipient and also to provide transportation would be the ideal solution. The EPSDT program recognizes the importance of transportation and allows funds to be expended for this purpose in accordance with regulations in existence under Title XIX.

The transportation problem is complicated by the uneven distribution of dentists. Most major cities have more than an adequate supply of dental personnel but they tend to be concentrated in the areas of the city in which middle and upper class individuals live, and as a result there are few dentists in low-income areas. This means that even in a

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metropolitan area access to care often is dependent upon availability of transportation. In some urban areas, health department clinics may be available and arrangements made to have EPSDT recipients treated there. It may be reasonable for the staff responsible for Medicaid, working jointly with the dentists in the community, to encourage dentists to open a second office in a low-income area. This may be attractive to a young dentist trying to start a practice in an affluent area that is already saturated with established dentists. In those places where neighborhood health centers are in operation, it may be possible for dentists to provide diagnostic and treatment services at the center. Dental school clinics may be able to treat EPSDT patients. Dental units of some state health departments operate fixed dental clinics and mobile units.

The task of gaining access to the dental care delivery system is likely to be more complex in rural areas, although the small size of the population, and therefore the number of dentists, make it usually easier to work out some kind of a cooperative arrangement. Children living in rural areas outside of a city will almost certainly have to have transportation provided unless the school that they attend is within walking distance of dental offices. One of the problems faced by young dentists seeking a location to practice is that rural areas with a low average income have a relatively small portion of people who can afford to purchase adequate dental care on their own. Experience in the states that offered dental care early in the Medicaid program's development has indicated that it is sometimes possible to persuade a dentist to move into a rural area because for the first time, Medicaid payments (along with payments from private patients) will enable him to earn an adequate living.

The most difficult task will occur in those rural areas in which there are no dentists or only one or two dentists who do not wish to treat children. In these areas it would be well to consult with the dentists in the state health department early in planning to see what resources might be developed. A few states have mobile dental units operated by the state health department which might come periodically to the rural areas without dental manpower during the year. Such communities should also consider the equipping of a modest dental facility with the idea of attracting a dentist from a community within driving distance who might use the community facilities for

one, two, or three days a week and carry on his regular practice in his home community the balance of the time. If it is not possible to attract dental manpower to a rural area, then consideration must be given to transporting patients to an urban center to receive care.

Dental care usually requires multiple visits to the dentist which may extend over a period of two or more months. This raises the possibility that a dentist may start a series of treatments only to have the child removed from the eligibility rolls before treatment can be completed. Fortunately this problem has been recognized and the regulations indicate that at least some children from families who cease to become eligible for cash payments may continue to receive medical and dental services for up to four months thereafter. The "Rules and Regulations" published in the Federal Register of March 11, 1974 (Vol. 39, No. 48, page 9514) read in part:

4. Effective January 1, 1974 provide that any family that was receiving assistance under the State's plan under Title IV-A in at least 3 of the 6 months immediately preceding the month in which such family became ineligible for such assistance because of increased hours of employment or increased income from employment, will continue to be eligible for medical assistance to the same extent and under the same conditions as it is furnished to the categorically needy under the current Title XIX plan, for a period of 4 calendar months beginning with the month in which such family became ineligible for assistance under Title IV-A because of increased hours of employment or increased earnings, as long as a member of the family is employed.

Program Participation

Successful programs to provide dental care under EPSDT will require the active involvement in the planning and operation of two major groups outside the state Medicaid agency. The first group that must be involved is the representatives of the dental profession since they possess the professional competence to guide policy decisions and are the individuals being called on to provide dental services. In small and

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moderate-sized communities it will be possible to communicate directly with the dentists who will be providing care for the agency. In metropolitan areas it will probably be necessary to ask that a special advisory committee be appointed to represent the dentists in the area. Dental practitioners are usually organized at the city or county level with affiliation with a state dental society which is a component of the American Dental Association. (A list of representatives of the state dental societies is given on page 45 of the Appendix). In some states a significant number of dentists will belong to the National Dental Association. Another important resource for consultation and communication with the dental profession is the dental program of the state health department. All state health departments have a dental staff and some cities and counties also have dental programs. A list of the dental programs in state health departments is given on page 49 of the Appendix, as is a listing of the Regional Offices of the Department of Health, Education and Welfare.

Although it is important to involve dentists in the planning of programs for the provision of dental care, it is equally important to involve representatives of the community at large, with particular emphasis on the population served by the Medicaid agency. Many of the problems in developing a successful program involve such nondental but health related supportive services as developing appropriate methods of transportation to get the children to the dental facility, the participation by the family in the receipt of dental care, health education around preventive dental care and continuing care of the teeth, and arrangements to take care of younger children while parents are accompanying the recipient of dental care to the dental facility.

One of the major barriers in dental programs for a certain population group has been cultural and socioeconomic blocks to communication between the public assistance agency, the dentists, and the recipients of care. In some cases this represents primarily a difference in priorities, a lack of understanding of the basic premises under which the dentist operates, and on the premises held by families served by public welfare. In other instances, such as the Spanish-speaking population, there may additionally be a language barrier. These types of problems will require marshaling the services of a variety of agencies and individuals representing a broad spectrum of the community. Serious consideration should be

given to the use of indigenous health workers as a method of handling administrative problems (such as transportation) and of establishing effective communication between the recipients of dental care and the dentists who provide the care.

MONITORING OF THE PROGRAM

An important aspect of the dental program should be a provision for monitoring the quality of care. This monitoring should include: 1) assessment of the dental health benefits of the entire program; 2) assessment of the quality of services provided; and 3) assessment of the administration and efficiency of the program.

Dental Health Benefits

One measure for evaluating the adequacy of the benefits of the program is the "Recommended Standards for Basic Oral Health Care of Children" developed and adopted by the American Academy of Pedodontics and the American Society of Dentistry for Children (see Appendix, page 37).

Assessment of Treatment

Assessment of dental services should be performed by a peer review committee composed of participating dentists. The purpose of the peer review committee is to provide positive assurances of proper care to all patients, the funding agency, and the participating dentist.

Children should be selected at random from the recipient group and examined periodically on a systematic basis to assess the quality of care. It may be possible to utilize the facilities

of the public school system in order to minimize transportation problems, if such arrangements can meet confidentiality restrictions. Examiners should be carefully trained and should not ordinarily be aware of which dentist had provided the treatment. The evaluation of treatment probably should include an interview with the child and the parent, as well as a clinical and possibly radiographic examination.

An important differentiation should be made between audit and quality assessment. Audit involves any procedure used to identify and substantiate the fact that service for which payment is claimed has in fact been provided. This may include methods such as computer checking of claims or the submission of post-treatment radiographs to be read by professionally qualified personnel. A methodology for the clinical assessment of the quality of dental services is provided in the "Manual for Children's Dental Care Programs" (see Appendix, page 43).

Evaluation of Program Administration

The assessment of program administration is essential to maintain and coordinate adequate provision of efficient and effective services. Included in this assessment should be:

Baseline Needs. Establishment of a baseline of dental needs for children entering the program which can be used to measure progress of those in the program and effectiveness of the program.

Follow-Up Care. After initial care has been provided, periodic rescreening is necessary. A method of assuring periodic rescreening and follow-up care (every 6 to 12 months based on the individual patient's needs) could be case management by computer, in which those children who missed their periodic dental visits would be identified for follow-up by case workers or other screening personnel.

Additional Criteria for Administrative Provision

The method used to authorize treatment services should be

limited to determining eligibility of the patient and extent of liability of the program.

Procedures for claims processing should be efficient and standardized, and reimbursement should be prompt. (See Appendix, page 81, for example of uniform report form.)

Advisory groups including representatives of the dental profession and the recipient population should continue to function during program operation, providing a mechanism to identify problems and a forum to develop acceptable solutions.

ILLUSTRATIVE CASE STUDIES IN ADMINISTRATION

Midtown Alpha

Midtown Alpha is a community of approximately 15,000 people which serves a rural trading area of approximately 35,000. There are twelve dentists in the community and all except one are participating in the Medicaid program. One dentist is elderly and no longer treats children in his practice. The dentists are members of a seven-county dental society so there is no official organization to represent the Midtown dentists specifically. For this reason the public assistance personnel met initially with all the dentists at a luncheon, and since have dealt individually with the eleven participating dentists. The dentists indicated that they preferred to set aside a certain amount of time to take care of Medicaid patients and most elected to allocate one or two half days a week for this purpose. Public welfare personnel have the roster of participating dentists and the days that they have designated for treating Medicaid patients. The Welfare Department assumes the responsibility for scheduling patients, following the directions that each dentist has given about how many patients he chooses to see in a half day. In order to assure that patients are able to get to the dentist, a contract has been entered into by the public assistance office and the local school system so that a driver and a school bus are available to pick up patients, transport them to the dental office, and return them either to their homes or to the school when treatment has been completed. Reporting of the services rendered and payments to the dentists are handled by the state public assistance office but eligibility for care is determined by the Midtown office.

The community water supply in Midtown A has not been fluoridated so the incidence of dental caries is quite high. For this reason,

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the costs for the initial round of treatment (which includes both recently occurring and accumulated decay) are high. In subsequent series of treatments it is expected that costs will drop by a half. Because of the high rate of dental caries, the dentists emphasized during the planning session the necessity for all children to receive maximum exposure to preventive and educational services. For this reason a cooperative arrangement has been made with the local health department to provide educational services and topical applications of fluoride to all children in the school system. The health department and voluntary community agencies are paying for the costs of the children who are not Medicaid eligible and the public welfare department is paying for Medicaid recipients on a per capita basis. Because of the high rate of caries attack, the dentists have indicated that all children should be seen at least every six months for a recall examination and further treatment.

Midtown Beta

This community is slightly smaller, with a population of approximately 10,000, and differs from Midtown Alpha in several important respects. In the first place, the community water supply has been fluoridated for almost 18 years, so that all of the children who have been born and raised there have a markedly reduced rate of dental caries. The community has a stable population so that more than 90 percent of the children have had the benefits of water fluoridation. The cost for the initial round of care will be approximately half that of the community that is not fluoridated and recall cycles will be even less costly. Because the incidence of dental caries is reduced, the dentists in this community feel that ordinarily they do not need to see all children at six-month intervals. The computer-based recall system is designed so that the dentists can indicate for each child the interval of recall.

Midtown Beta is located in a state where all fiscal and administrative policies are established at the state level. No formal arrangements for appointment scheduling or transportation have been made locally and the dentists in this community have indicated that they wish to see children being financed by Medicaid on the same basis as all other child patients, and they wish to handle appointment scheduling themselves. The community is small enough so that the key individuals (health department, public welfare and dentists) know each other

personally and by telephone can expedite the arrangements for children to get to the dentist's office and return to their homes or school. In some cases volunteers in the neighborhood are enlisted, in other instances public welfare workers or nurses will provide transportation, and sometimes members of church groups or the P.T.A. will assist in transportation.

In Midtown Beta the dentists indicated that they wish to provide education and counseling about dietary control of caries, as well as topical fluorides, in their own offices as part of a routine preventive dentistry appointment.

Metropolis Alpha

This community is a rapidly growing city of 750,000 and is the trade center for an area with a radius of about 300 miles. There is an abundance of resources to provide dental health services. There is a dental school from which a large number of graduating dentists chose to settle in the community, either because they are natives or because they had gone to the local school for as long as five to ten years and felt the community was their home. Although the number of dentists is more than adequate, their distribution poses problems since there are relatively few of them in the central city where a large number of poor families live, and an overabundance in the affluent suburbs surrounding the central core.

Metropolis Alpha has an active and dynamic health department which includes a long standing dental program headed by a full-time dentist with public health training. When approached by the local office of the public welfare agency, the dentists in the community first appointed a planning committee to be responsible for the development of a program for Medicaid, and this committee contacted the public health dentist with the request that he develop and organize a plan for the city.

The plan is functioning effectively. In areas where private dentists are located, the children are referred to them. There is a neighborhood health center in one poverty area in which salaried dentists provide care for the children eligible for services in this area. The health department has six trailers completely equipped to provide dental care and employs younger dentists

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on a part-time basis to provide dental care. These units provide services in areas in which dentists are not located and transportation is a major problem.

Metropolis A's population comprises 20 percent of the population of the entire state. For this reason special rules and regulations have been developed at the state level to accommodate to the particular problems of Metropolis A, and the city dental director and the city advisory committee work closely with the dentists in the state health department and a state-wide advisory committee of dentists.

Metropolis Beta

Metropolis Beta is about the same size as Metropolis Alpha, but differs considerably in its available resources. There is not a dental school in the area and there is no organized dental program in either the city or county. Fortunately the city is in a state that has a strong and active Delta Dental Plan (a dental service corporation which is an organization of providers of service analogous to the Blue Shield). In this case the focus for planning and leadership has evolved around the full-time staff of the dental service corporation and their advisory committees.

The dentists preferred that educational and preventive services be provided on a group basis and the dental service corporation has entered into a contract with the public welfare agency to provide parent and patient education, topical fluorides, home care instructions, and dietary counseling on a group basis at a per capita fee per child. Dental care is provided primarily in the offices of private dentists and the full-time employees of the dental service corporation handle referrals, appointments, and recall scheduling.

In one area of the city there are no dentists at all and it is very difficult to obtain transportation to areas supplied by dentists. Because of the particular need in this area, the dental service corporation has arranged a dental clinic set up in a health department office in the area and dentists are paid on an hourly basis to staff this clinic. The clinic employs a full-time dental assistant-clerk and five dentists, each of whom works one day a week.

Village Alpha

This is a rural hamlet of only 2,000 people and a dentist has not practiced in the immediate area for more than 20 years. Citizens who can afford to pay for care on their own drive 45 miles to larger community but it is difficult to get appointments for dental care even in the distant city. Fortunately Village Alpha is in a state where the state department of health has for many years operated mobile dental units staffed by full-time dentists and assistants who travel from one community to the next to serve the rural areas. In this state a contract has been developed between the office of public welfare and the state health department to share the costs of operating the dental trailers in rural areas. The state welfare office pays for the cost of dental care for beneficiaries of Medicaid and the state health department, jointly with the county governments, pays for the treatment of other needy children.

Village Beta

This small community is not as fortunate as Village Alpha because it is located in a state that does not have a program to provide treatment for children in rural areas and there is no program in the county. Presently public welfare funds are being used to reimburse the county school system for the costs of using the school bus to transport children the 50 miles to the next largest community. It is difficult to get the dentists in the adjoining county to set aside the time to see 15 or 20 children on one day and to take fewer children on the bus is economically inefficient. The P.T.A. is attempting to raise money to convert an unused room in one of the elementary schools into a dental office; six of the dentists in the neighboring community have indicated that they would be willing to drive to Village Beta one day a week to provide care for public welfare children if clinical facilities were available. The P.T.A. campaign is spearheaded by a young mother who was formerly employed as a dental assistant, and it is anticipated that she will go back to work and be responsible for the operation of the clinic and assist each dentist when he is in the facility.

Community leaders have met with the dentist and an engineer from the state health department. The majority of the children live in the rural areas surrounding the village and do not use the village water supply. Plans have been made to fluoridate both

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the village water supply and the water supply of the rural consolidated school.

State Edda

State Edda has developed a reasonably imaginative plan for identifying children and referring them to the dentist. The major stumbling block is that a restricted budget has kept fees to the providers of dental care at a level much below those ordinarily charged in private practice. For that reason it has been impossible to attract any sizeable number of dentists who are willing to accept Medicaid patients.

Initially there was some hard feeling between the dental society and the public assistance officials. A series of meetings, however, cleared up this misunderstanding and the dentists realized that the state agency was doing as much as it could within the limited funds available to it. The dentists agreed to approach the governor and ask that a more adequate budget for EPSDT be generated initially by allocating some "revenue-sharing" monies and that a more adequate budget request be made to the legislature when it meets within one year.

State Delta

This state has developed an excellent method of "case management" to identify children, see that they are referred and that there is follow-up on treatment and rescheduling for periodic examinations. This is done by means of a computer which reduces the dependence on case workers to a minimum. The computer's master file shows when a child is referred for screening and when the child has been screened, as well as those children for whom abnormalities are found and whether they have received recommended diagnosis and treatment. In cases where appropriate care is not completed in a reasonable length of time, the local welfare office is notified by computer printout so that follow-up with the child and family can be made. When an indication is received in the computer center that a child has completed a series of dental appointments, the file is marked to automatically send out a notice that the recipient should return for a dental examination nine months later. This automatically-printed notice goes both to the local welfare office and to the recipient. If no report is received from the dentist within an appropriate time, a

notice is sent to the case worker requesting that he follow-up directly with the family.

Metropolis Charlie

This is the major standard metropolitan area in the state with a population exceeding 2,000,000. The water has been fluoridated for more than a decade so that the level of caries attack is relatively low. There are a variety of dental resources including a dental clinic in a neighborhood health center, extramural clinics of the school of dentistry using dental students, and health department clinics in city-operated hospitals and in some regional health centers operated by the health department.

Although there are a variety of resources, the major--and critical--problem is maldistribution. Most of the dentists in private practice are located in the suburban areas surrounding the central core of the city which has very few resources other than a limited number of clinics. Public transportation is available but it is difficult to get from the central core to suburban areas, and it is also difficult to get from one place to another in the central core of the city to utilize clinics.

The decision has been made not to attempt to organize separate transportation facilities but to do a better job than in the past of utilizing the public transportation system. The hope is that both the scheduling of patients and the arrangements for getting them to the dentist can be handled by trained indigenous health personnel located in each of the regional health centers maintained by the health department. The Medicaid agency and the health department have agreed to share the cost of employing these health aids and the health department dental program will arrange for their training in elemental methods of screening and in ways of getting Medicaid-eligible children to private dentists or clinical facilities. Although less than adequate, this plan seems to offer the best opportunity of getting as much dental care to Medicaid recipients as is possible under present circumstances.

Alpha State

This is a predominantly rural state. Most of the dentists are located in a community of 35,000 in the center of the state, and another community of 25,000 on the eastern boundary. Fifteen of the 75 counties within the state do not have any dentists at all and there appears little possibility of persuading dentists to locate in these counties.

The state has had an active program to fluoridate community water supplies but this important preventive procedure can reach relatively few children, first because only 30 percent of the child population lives in areas served by community water supplies and second, so many of the communities are very small and the cost and technical problems of introducing fluoridation mean that this preventive measure will probably not be available for some time.

The children eligible for care under Medicaid are spread widely throughout the state and there seems no practical way to organize a separate transportation system to bring these children into the centers where dentists are located. The state health department has one dental trailer staffed by a full-time clinical dentist and assistant but this unit can reach only a relatively small number of communities during the course of the year.

The Medicaid agency has had frequent meetings with the Dental Care Committee of the state dental association in attempting to find some solution to the major problems of distribution and transportation. Despite the best efforts of both groups, it seems apparent that it will not be possible to provide dental care for many of the Medicaid-eligible children. Under the circumstances the important thing appears to be to develop a system whereby those children who need care the most can be identified and placed under care.

For this purpose the state dental society committee has developed a written set of priorities and has offered to set up training sessions for public health nurses and employees of the Medicaid agency to help them understand the priority system and recognize particular dental problems of children. The priority system clearly identifies children who are considered to need emergency care and it is hoped that in one way or another local

people will be able to find ways to transport them to communities where there is a dentist in practice. The second priority will be for preventive services. The ranking of other priorities relates to those conditions of the mouth most likely to lead to irreparable damage to the dentition if they are not treated immediately.

As much as possible, preventive and educational services will be offered on a group basis. The state health department has obtained war surplus portable dental chairs and lights. This equipment will be set up in school cafeterias or gymnasiums to provide topical fluoride applications, patient education, and other preventive services. Local personnel will make the arrangements and handle scheduling, and dentists in the urban centers have agreed to go to the rural communities to supervise dental hygienists, dental assistants, and health aides in giving topical fluoride applications and patient education. The Medicaid agency has agreed to reimburse the dentists at an hourly rate plus transportation.

The common pattern for a school-based preventive program would be to set up five portable dental chairs and lights. P.T.A. volunteers and health aides would bring the children from the classroom to the temporary dental "clinic," record pertinent information, sterilize instruments and keep a steady flow of patients. In this state the dental practice act allows dental hygienists to do the cleaning of the teeth necessary before the application of the fluoride solution and allows dental assistants to apply the solution itself. The practice act specifies that this may only be done under the direct supervision of a dentist. An ordinary team, then, would consist of a licensed dentist, who primarily would merely supervise the overall functioning of the program, one or two hygienists who would do the cleaning of the teeth with a dental engine (with the dentist helping from time to time to keep the flow of patients going), and three or four trained health aides or dental assistants to apply the fluoride solution to the mouth, and to demonstrate to the child proper methods of using the toothbrush and dental floss and other preventive procedures.

One problem that was encountered early in the planning was the fact that Medicaid-eligible children could not be taken out of a classroom in such a setting to receive the treatment without destroying confidentiality of their status. For this reason

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it was decided that it would be necessary to provide services for all children in an age group. The Medicaid agency would pay for those children who were Medicaid-eligible and the proportion of the program providing services for other children would be financed by city and county health departments, voluntary agencies, P.T.A. fund drives, and in some cases by cases by direct grants from the state health department.

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RECOMMENDED STANDARDS FOR BASIC ORAL HEALTH CARE OF CHILDREN*

These guidelines are designed to establish a standard of adequate oral care for children and to assist in "peer review," particularly in programs where care is provided or purchased for groups of children. In group care programs the standards apply to the administrative decisions determining the character of services provided and/or the provisions relating to the services for which payment will be allowed as well as the performance of the dentist in providing patient care.

In this and related statements, the committees have placed high priority on diagnostic services (including a patient history) and clinical preventive procedures (including parent-patient education). It is important to note that some of these services do not leave tangible evidence of their accomplishment in the mouth. For this reason, innovative and rigorous methods must be developed to confirm that patients receive these high-priority components of professional care. Otherwise, there will not be a reasonable assurance that the professional time or fees allocated for these purposes have been effectively utilized.

I. Admission procedures

- A. An interview history with the parent or responsible person and child to include history of health problems and medical treatment, past dental experience, and the policies of the office relating to plans for treatment and payment.

*Approved by the American Academy of Pedodontics and the American Society of Dentistry for Children.

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- B. Clinical charting of existing condition of the oral and facial structures.
 - C. Radiographic survey with films sufficient in number and quality to detect anomalies, diseases, and to evaluate development.
 - 1. At any age before seven - a child should receive two cavity-detecting (bitewing) radiographs and at least six periapical radiographs or the equivalent such as a panographic survey.
 - 2. Between seven and thirteen years - a new patient should receive two cavity-detecting (bitewing) and ten periapical radiographs or the equivalent such as a panographic survey.
 - 3. Above the age of 13 - the radiographic survey should include cavity-detecting (bitewing) and fourteen periapical radiographs or the equivalent such as a panographic survey.
- II. Patient and parent counseling, motivation and preventive procedures
- A. Plaque control
 - 1. Before the age of seven - parents are to be instructed in toothbrushing and the use of disclosing tablets and also are expected to cleanse the mouth in youngest ages involving the child in the process to the extent practical but to maintain direct responsibility for mouth cleanliness.
 - 2. Seven years and above - educational effort should be directed primarily to the child whose dexterity will increase with maturity. The child is expected to assume responsibility for his own oral hygiene, encouraged and supported by parents and reinforced by dental office personnel at periodic recall visits.

- B. Oral prophylaxis and use of fluorides applied topically at least annually, and more frequently when necessary.
- C. Review of dietary patterns of the child and appropriate counseling.
- D. Prescribe fluorides for systemic use when not available through a community water supply.

III. Diagnosis and plan of treatment

- A. Identification of anomalies, disease and other significant deviations from normal for treatment or referral.
- B. Formulation of an organized approach to a plan for treatment consistent with the needs of the patient and level of patient acceptance and compliance. Priority should be given to the elimination of oral problems in the following order:
 - 1. Pain and acute infection.
 - 2.* Correction of major deformities.
 - 3. Periodontal conditions.
 - 4. Carious lesions.
 - 5. Prosthetic appliances or appliances for the guidance of growth.
- C. Presentation of proposed plan of treatment to patient, parent (or responsible party) with clear explanation of need. The possible consequences of nonacceptance, or acceptance of partial treatment, should also be explained.

*The treatment of deformities caused by oral clefts, burns, trauma, etc., are currently provided by specialized agencies (such as "Crippled Children's Services") in most states.

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- IV. Control of pain and apprehension should be achieved through utilization of appropriate methods of pain control, to assure that the child will not experience unnecessary pain and discomfort.
- V. Emergency care for treatment of acute conditions and pain should be immediate, conservative and based on the use of diagnostic aids appropriate to the specific problem.
- VI. Restorative dentistry
 - A. All carious material should be removed from a lesion before restoration except where indirect pulp therapy is indicated.
 - B. Acceptable procedures for the management of the pulp endangered by carious lesions or trauma include:
 - 1. Indirect pulp treatment (capping).
 - 2. Cavity liners and/or protective bases.
 - 3. Direct pulp treatment (capping).
 - 4. Pulpotomy.
 - 5. Pulpectomy.
 - 6. Root canal filling.
 - C. The cavity preparation should meet currently accepted standards consistent with the requirements of the restorative material used.
 - D. The completed restoration should show adequate marginal adaptation and satisfy requirements of esthetic form and function.
- VII. Prosthetic appliances and appliances for the guidance of growth are indicated in the following circumstances:
 - A. Premature loss of primary teeth and loss of permanent teeth where the necessary consideration

is restoration of form and function.

- B. Premature loss of primary teeth where the necessary considerations are for space management and function, when confirmed by acceptable diagnostic findings.
- C. Disturbance or loss of form and function due to congenital defects or anomalies, trauma, etc.
- D. Absence of proper form or function due to malpositions of teeth or dental arches.

VIII. Preventive maintenance

- A. Patients should be examined periodically for observation and maintenance, and the frequency should be based on patient needs. The dentist should operate a recall system or at least clearly inform the parent when the child should return.
- B. Maintenance services should include:
 - 1. Reassessment of oral health status and reinforcement of the preventive program.
 - 2. Topical applications of fluorides at least annually.
 - 3. Cavity-detecting radiographs at least annually, and periapical films consistent with the needs of the patient.
 - 4. Any additional clinical treatment indicated should be completed within a reasonable time.

MAJOR SOURCE DOCUMENT

The American Academy of Pedodontics and the American Society of Dentistry for Children have prepared a "Manual for Children's Dental Care Programs" which amplifies considerably the information contained in this document. Particular emphasis is given to methods of assessing the quality of care. Copies may be obtained from:

Miss Merle Hunter
American Academy of Pedodontics
Suite 1235
211 East Chicago Avenue
Chicago, Illinois 60611

or

Mr. Richard Ruddy
American Society of Dentistry for Children
211 East Chicago Avenue
Chicago, Illinois 60611

OTHER REFERENCES

1. Who pays the bill; some frank answers to your questions on third party payment. (This is an 11-page booklet designed for mass distribution to practicing dentists. It is available for purchase from Mr. Richard Ruddy of the A.S.D.C. whose address is given above.) The leaflet was prepared for A.S.D.C. and the American Academy of Pedodontics by Wesley O. Young, D.M.D., Bruce Johnson, D.D.S., and Roy L. Lindahl, D.D.S.
2. Social and Rehabilitation Service, Medical Services Administration. Medicaid; early and periodic screening, diagnosis, treatment for individuals under 21; guidelines. Washington, Social and Rehabilitation Service, June 28, 1972. (Available from Social and Rehabilitation Service, Medical Services Administration, D.H.E.W., Washington, D.C. 20201.)
3. Office of Child Development, D.H.E.W. Project headstart: dental services. Publication No. 2A-246-964. (Available from the Agency.)
4. Dunning, J. M. Principles of dental public health, 2nd Ed. Cambridge, Harvard, 1970. XIV + 598 p.
5. Young, W. O. and Striffler, D. F. The dentist, his practice and his community. Philadelphia, Saunders, 1969. XVI + 346 p.

CONSULTATION

State Dental Societies

Alabama Dental Association, 836 Washington Ave., Montgomery,
Alabama 36104
Alaska Dental Society, P.O. Box 3-726, Anchorage, Alaska 99503
Arizona State Dental Association, 3800 N. Central Ave., Suite
320, Phoenix, Arizona 85012
Arkansas State Dental Association, P.O. Box 337, Arkadelphia,
Arkansas 71923
California Dental Association, P.O. Box 91258, Tishman Airport
Center, Los Angeles, California 90009
Colorado Dental Association, 2045 Franklin St., Suite #507,
Denver, Colorado 80205
Connecticut State Dental Association, 60 Washington St., Suite
909, Hartford, Connecticut 06106
Delaware State Dental Society, 1925 Lovering Ave., Wilmington,
Delaware 19806
District of Columbia Dental Society, 1835 Eye St., N.W.,
Suite 202, Washington, D.C. 20006
Florida Dental Association, P.O. Box 18105, 3021 Swann Ave.,
Tampa, Florida 33609
Georgia Dental Association, 813 American Federal Bldg., Macon,
Georgia 31201
Hawaii Dental Association, 291 Alexander Young Bldg., Honolulu,
Hawaii 96813
Idaho State Dental Association, 1487 W. Hays, Boise, Idaho 83702
Illinois State Dental Society, 524 S. Fifth St., Springfield,
Illinois 62701
Indiana Dental Association, 1013 Hume Mansur Bldg., Indianapolis,
Indiana 46204
Iowa Dental Association, 240 Insurance Exchange Bldg., Des
Moines, Iowa 50309

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Kansas State Dental Association, 4301 Huntoon, Topeka, Kansas
66604

Kentucky Dental Association, 1940 Princeton Dr., Louisville,
Kentucky 40205

Louisiana Dental Association, 404 Richards Bldg., New Orleans,
Louisiana 70112

Maine Dental Association, 97A Western Ave., Waterville, Maine
04901

Maryland State Dental Association, 305 W. Chesapeake Ave.,
Towson, Maryland 21204

Massachusetts Dental Society, Prudential Tower Bldg., Suite
4318, Boston, Massachusetts 02199

Michigan Dental Association, 230 N. Washington Square, Lansing,
Michigan 48933

Minnesota Dental Association, 2236 Marshall Ave., Saint Paul,
Minnesota 55104

Mississippi Dental Association, P.O. Box 4205, Jackson,
Mississippi 39216

Missouri Dental Association, 103 W. High St., Jefferson City,
Missouri 65101

Montana Dental Association, P.O. Box 513, Butte, Montana 59701

Nebraska Dental Association, Room 1220, 134 S. 13th St.,
Lincoln, Nebraska 68508

Nevada Dental Association, P.O. Box 1598, Carson City, Nevada
89701

New Hampshire Dental Society, 23 School St., Concord, New
Hampshire 03301

New Jersey Dental Association, P.O. Box 1715, North Brunswick,
New Jersey 08902

New Mexico Dental Association, 611 Running Water Circle, S.E.,
Albuquerque, New Mexico 87123

Dental Society of the State of New York, 30 E. 42nd St., New
York, New York 10017

North Carolina Dental Society, 2310 Myron Dr., Raleigh, North
Carolina 27607

North Dakota Dental Association, 420 N. 4th St., Rm. 2,
Bismarck, North Dakota 58501

Ohio Dental Association, 40 S. Third St., Columbus, Ohio 43215

Oklahoma Dental Association, 629 Northwest Expressway, Oklahoma
City, Oklahoma 73118

Oregon Dental Association, 620 S.W. Fifth Ave., Portland, Oregon
97204

Panama Canal Zone Dental Society, P.O. Box 1417, Balboa, Panama
09827

Pennsylvania Dental Association, P.O. Box 3341, Harrisburg,
Pennsylvania 17105
Colegio de Cirujanos Dentistas de Puerto Rico, P.O. Box 9023,
Santurce, Puerto Rico 00908
Rhode Island Dental Association, 901 Union Trust Bldg.,
Providence, Rhode Island 02903
South Carolina Dental Association, 723 Queen St., Columbia,
South Carolina 29205
South Dakota Dental Association, 115 W. 12th Ave., Mitchell,
South Dakota 57301
Tennessee Dental Association, 210 23rd Ave. No., Nashville,
Tennessee 37203
Texas Dental Association, 4920 N. Interregional Hwy., Austin,
Texas 78751
Utah Dental Association, 315 Medical Arts Bldg., Salt Lake
City, Utah 84111
Vermont State Dental Society, 125 S. Winooski Ave., Burlington,
Vermont 05401
Virgin Islands Dental Association, Estate Tutu Professional
Bldg., St. Thomas, Virgin Islands 00801
Virginia Dental Association, 2015 Staples Mill Rd., Suite 331,
Richmond, Virginia 23230
Washington State Dental Association, 417 Grosvenor House,
Seattle, Washington 98121
West Virginia Dental Association, P.O. Box 1946, 408 Davidson
Bldg., Charleston, West Virginia 25327
Wisconsin Dental Association, 633 W. Wisconsin Ave., Milwaukee,
Wisconsin 53203
Wyoming Dental Association, 1303 S. Jackson, Casper, Wyoming
82601

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National Dental Organizations

American Academy of Pedodontics, 211 East Chicago Avenue,
Suite 1235, Chicago, Illinois 60611

American Dental Association, 211 East Chicago Avenue, Chicago,
Illinois 60611

American Society of Dentistry for Children, 211 East Chicago
Avenue, Chicago, Illinois 60611

National Dental Association, P.O. Box 197, Charlottesville,
Virginia 22902

State Health DepartmentsAlabama

Bureau of Dental Health
Alabama Department of
Public Health
State Office Building
Montgomery, Alabama 36104

Alaska

Alaska Dental Society
2211 Sunrise Drive
Anchorage, Alaska 99504

Arizona

Division of Dental Health
Arizona State Department
of Health
Arizona State Office Building
1740 West Adams Street
Phoenix, Arizona 85007

Arkansas

Bureau of Dental Health
Arkansas State Board of
Health
State Health Building
Little Rock, Arkansas 72201

California

Preventive Medical Services
Programs Dental Health
California State Department
of Public Health
722 Capitol Avenue
Sacramento, California 95814

Colorado

Public Health Dentistry Section
Colorado Department of Public
Health
4210 East 11th Avenue
Denver, Colorado 80220

Connecticut

Dental Health Section
Connecticut State Department
of Health
79 Elm Street
Hartford, Connecticut 06115

Delaware

Dental Health
Delaware State Board of
Health
Dover, Delaware 19901

District of Columbia

Bureau of Dental Health
D.C. Community Health
Sciences Administration
Universal Building, North,
Rm. 814
1875 Connecticut Ave. N.W.
Washington, D.C. 20009

Florida

Bureau of Dental Health
Florida State Board of Health
1217 Pearl Street, Box 210
Jacksonville, Florida 32201

Georgia

Branch of Dental Health
State Department of Public
Health
47 Trinity Avenue, S.W.
Atlanta, Georgia 30303

Hawaii

Division of Dental Health
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

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Idaho

Dental Health Section
Idaho Department of Health
State House
Boise, Idaho 83707

Illinois

Division of Dental Health
Illinois Department of
Public Health
State Regional Office Bldg.
4500 South 6th
Springfield, Illinois 62706

Indiana

Division of Dental Health
Indiana State Board of Health
1330 West Michigan Street
Indianapolis, Indiana 46207

Iowa

Dental Health Division
Iowa State Dept. of Health
State Office Building
Des Moines, Iowa 50319

Kansas

Medical-Dental Health Division
Kansas State Dept. of Health
535 Kansas Avenue, 8th Fl.
Topeka, Kansas 66603

Kentucky

Dental Health Program
Kentucky State Dept. of Health
275 East Main Street
Frankfort, Kentucky 40601

Louisiana

Division of Dental Health
Louisiana State Department
of Health
P.O. Box 60630
New Orleans, Louisiana 70160

Maine

Division of Dental Health
Dept. of Health & Welfare
State House
Augusta, Maine 04330

Maryland

Division of Dental Health
Maryland State Department
of Health
310 West Preston Street
Baltimore, Maryland 21201

Massachusetts

Director of Dental Health
Mass. Dept. of Public Health
600 Washington Street
Boston, Mass. 02111

Michigan

Division of Public Health
Dentistry
Michigan Dept. of Public
Health
3500 North Logan
Lansing, Michigan 48914

Minnesota

Section of Health Education
Minnesota Dept. of Health
717 Delaware St., S.E.
Minneapolis, Minnesota 55440

Mississippi

Division of Public Health
Dentistry
Mississippi State Board of
Health
Jackson, Mississippi 39205

Missouri

Bureau of Dental Health
Missouri Division of Health
P.O. Box 570
Jefferson City, Missouri 65101

Montana

Dental Health Division
 Montana State Board of
 Health
 Cogswell Building
 Helena, Montana 59601

Nebraska

Division of Dental Health
 Nebraska Dept. of Health
 Room 404, Lincoln Building
 1003 "O" Street
 Lincoln, Nebraska 68508

Nevada

Bureau of Dental Health
 Nevada Division of Health
 201 South Fall Street
 Carson City, Nevada 89701

New Hampshire

Bureau of Dental Public Health
 New Hampshire State Dept. of
 Health
 State Health Building
 61 South Spring
 Concord, New Hampshire 03301

New Jersey

Dental Health Program
 New Jersey State Dept. of
 Health
 Health Agricultural Bldg.
 Box 1540
 Trenton, New Jersey 08625

New Mexico

Dental Health Section
 New Mexico Health & Social
 Services Department
 P.O. Box 2348
 Santa Fe, New Mexico 87501

New York

Bureau of Dental Health
 N.Y. State Dept. of Health
 28 Essex Street
 Albany, New York 12206

North Carolina

Dental Health Division
 North Carolina State Board
 of Health
 Box 2091
 Raleigh, North Carolina 27602

North Dakota

Division of Dental Health
 State Department of Health
 State Capitol Building
 Bismarck, N. Dakota 58501

Ohio

Division of Dental Health
 Ohio Department of Health
 450 East Town Street
 Columbus, Ohio 43215

Oklahoma

Div. of Preventive Dentistry
 State Department of Health
 3400 North Eastern
 Oklahoma City, Oklahoma 73105

Oregon

Dental Health Section
 Oregon State Board of Health
 State Office Building
 1400 S.W. Fifth Avenue
 Portland, Oregon 97201

Pennsylvania

Division of Dental Health
 Commonwealth of Pennsylvania
 Department of Health
 Health & Welfare Building
 Harrisburg, Pa. 17120

DENTAL

Puerto Rico

Division of Oral Health
Dept. of Health of Common-
wealth of Puerto Rico
Ponce de Leon Avenue
Pda. 19, Santurce
San Juan, Puerto Rico 00908

Rhode Island

Div. of Dental Public Health
R.I. Department of Health
100 Fountain Street
Providence, R.I. 02903

South Carolina

Division of Dental Health
S.C. State Board of Health
J. Marion Sims Building
2600 Bull Street
Columbia, S. Carolina 29201

South Dakota

Division of Dental Health
State Dept. of Health
Pierre, South Dakota 57501

Tennessee

Div. of Dental Health Services
Tenn. Dept. of Public Health
Middle Tenn. Chest Disease
Hospital
Ben Allen Road
Nashville, Tennessee 37216

Texas

Dental Health Section
Texas State Dept. of Health
1100 West 49th Street
Austin, Texas 78756

Utah

Dental Health Section
Utah State Division of Health
44 Medical Drive
Salt Lake City, Utah 84113

Vermont

Dental Division
Vermont Dept. of Health
39-43 Pearl Street
Burlington, Vermont 05401

Virginia

Division of Dental Health
Virginia Dept. of Health
109 Governor Street
Richmond, Virginia 23129

Virgin Islands

Dental Health Services
Department of Health
Govt. of Virgin Islands, U.S.
Charlotte Amalie
St. Thomas, V.I. 00801

Washington

Dental Health Section
Wash. State Dept. of Health
Public Health Building
Olympia, Washington 98502

West Virginia

Division of Dental Health
W. Virginia Dept. of Health
Room 554
1800 Washington St. E.
Charleston, W. Va. 25311

Wisconsin

Section of Dental Health
Wisconsin Division of Health
Box 309
Madison, Wisconsin 53701

Wyoming

Wyoming Dept. of Public
Health & Social Services
State Office Building
Cheyenne, Wyoming 82001

Regional Offices, Department of Health, Education and Welfare

Regional Health Administrator
HEW Region I
John Fitzgerald Kennedy
Federal Building
Boston, Mass. 02203
Telephone: (617) 223-5845

Regional Health Administrator
HEW Region VI
1100 Commerce Street
Dallas, Texas 75202
Telephone: (214) 749-7721

Regional Health Administrator
HEW Region II
Federal Building
26 Federal Plaza
New York, N.Y. 10007
Telephone: (212) 264-2250

Regional Health Administrator
HEW Region VII
601 East 12th Street
Kansas City, Mo. 64106
Telephone: (816) 374-2008

Regional Health Administrator
HEW Region III
P.O. Box 13716
Philadelphia, Pa. 19101
Telephone: (215) 597-6464

Regional Health Administrator
HEW Region VIII
Federal Office Building
19th and Stout Street
Denver, Colorado 80202
Telephone: (303) 837-2701

Regional Health Administrator
HEW Region IV
50 Seventh Street N.E.
Atlanta, Georgia 30323
Telephone: (404) 526-5673

Regional Health Administrator
HEW Region IX
Federal Office Building
50 Fulton Street
San Francisco, Calif. 94102
Telephone: (415) 556-4410

Regional Health Administrator
HEW Region V
300 South Wacker Drive
Chicago, Illinois 60606
Telephone: (312) 353-1831

Regional Health Administrator
HEW Region X
Arcade Plaza Building
1321 Second Avenue
Seattle, Wash. 98101
Telephone: (206) 442-0536

Dental Service Corporations (Delta Dental Plans)

A dental service corporation is an organization of dentists which offers a professionally sponsored plan of dental care purchased by a third party for any group of beneficiaries. It is roughly comparable to Blue Cross-Blue Shield in the field of hospital and medical care. In states with active programs, financing EPSDT dental care through the Delta Dental Plan would be most efficient and would relieve the Medicaid agency of administrative tasks. Dental service corporations are relatively new so that they vary in size and activity. Some are very large, administering dental care plans for millions of people; others are much smaller. The listing below includes seven delta plans inactive as of June, 1974, but local inquiries can determine whether or not the plan may be reactivated.

The Delta plans are coordinated by a national association. Inquiries may be addressed to: Mr. Herbert C. Lassiter, Executive Vice President, Delta Dental Plans Association, 211 East Chicago Avenue, Chicago, Illinois 60611.

Delta Dental Plan of Alabama
P.O. Box 1572
Montgomery, Alabama 36102
Telephone: (205) 265-1277

Florida Dental Services Inc.
P.O. Box 5037
Jacksonville, Fla. 32207
Telephone: (904) 398-8479

Delta Dental Plan of Alaska
P.O. Box 3-726
Anchorage, Alaska 99501
Telephone: (907) 274-4828

Delta Dental Plan of Georgia
22 Perimeter Center East N.E.
Atlanta, Georgia 30346
Telephone: (404) 394-4022

California Dental Service
P.O. Box 7736
San Francisco, Calif. 94120
Telephone: (415) 864-9800

Hawaii Dental Service
700 Bishop Street
Honolulu, Hawaii 96813
Telephone: (808) 521-1431

Colorado Dental Service
1732 High Street
Denver, Colorado 80218
Telephone: (303) 399-0323

Delta Dental Plan of Idaho
903 Warren Street
Boise, Idaho 83706
Telephone: (208) 345-7107

Illinois Dental Service
211 East Chicago Avenue
Chicago, Illinois 60611
Telephone: (312) 664-7355

Delta Dental Plan of Iowa
241 Insurance Exchange Bldg.
Des Moines, Iowa 50309
Telephone: (515) 243-2276

Delta Dental Plan of Kansas
410 Petroleum Bldg.
Wichita, Kansas 67202
Telephone: (316) 263-0165

Delta Dental Plan of Kentucky
3101 Bardstown Road
Louisville, Kentucky 40205
Telephone: (502) 452-1511

Louisiana Dental Care Corp.
2100 St. Charles Avenue
Suite 1
New Orleans, La. 70130
Telephone: (504) 525-4146

Maine Dental Service Corp.
776 Main Street
Westbrook, Maine 04092
Telephone: (207) 854-4660

Maryland Dental Service Corp.
26 West Pennsylvania Ave.
Towson, Maryland 21204
Telephone: (301) 296-8005

Massachusetts Dental Service
133 Federal Street
Boston, Mass. 02106
Telephone: (617) 482-5469

Delta Dental Plan of Michigan
P.O. Box 416
Lansing, Michigan 48902
Telephone: (517) 372-8040

Delta Dental Plan of
Minnesota
4570 West 77th St.
Minneapolis, Minn. 55435
Telephone: (612) 920-0637

Mississippi Dental Services
Inc.
P.O. Box 4205
Jackson, Miss. 39216
Telephone: (601) 982-0778

Missouri Dental Service
118A East High Street
Jefferson City, Mo. 65101
Telephone: (314) 635-8484

Delta Dental Plan of Montana
25 South Ewing
Helena, Montana 59601
Telephone: (406) 442-2004

New Hampshire Dental Service
Corp.
45 Amherst Street
Milford, New Hampshire 03055
Telephone: (603) 673-1233

New Jersey Dental Service Plan
251 South Harrison St.
East Orange, N.J. 07018
Telephone: (201) 673-1155

Delta Dental Plan of New
Mexico
1438 Girard Blvd. N.E.
Albuquerque, N. Mexico 87106
Telephone: (505) 256-9077

New York Dental Service Corp.
355 Lexington Ave.
New York, N.Y. 10017
Telephone: (212) 661-2940

DENTAL

Delta Dental Plan of
North Carolina
2310 Myron Drive
Raleigh, N.C. 27607
Telephone: (919) 787-8626

Delta Dental Plan of Ohio
3620 North High Street
Columbus, Ohio 43214
Telephone: (615) 268-3561

Oregon Dental Service
610 S.W. Broadway
Portland, Oregon 97205
Telephone: (503) 228-6554

Delta Dental of Pennsylvania
700 Green Street
Harrisburg, Pa. 17102
Telephone: (717) 238-5331

Rhode Island State Dental
Service Corp.
4646 Post Road
East Greenwich, R.I. 02818
Telephone: (401) 884-2190

South Carolina Dental Health
Inc.
P.O. Box 8535, Station A
Greenville, S.C. 29604
Telephone: (803) 239-5331

Delta Dental Plan of South
Dakota
P.O. Box 1194
Pierre, S. Dakota 57501
Telephone: (605) 222-2503

Delta Dental Plan of Tennessee
210 23rd Ave. No.
Nashville, Tennessee 37203
Telephone: (615) 327-0851

Delta Dental Plan of Utah
65 West Louise Avenue
Salt Lake City, Utah 84115
Telephone: (801) 487-9873

Vermont Dental Service
105 Eastern Avenue
St. Johnsbury, Vt. 05819
Telephone: (802) 748-3906

Virginia Dental Service Plan
1328 Third St. S.W.
Roanoke, Va. 24016
Telephone: (703) 343-8009

Washington Dental Service
2208 N.W. Market Street
Seattle, Washington 98107
Telephone: (206) 789-2900

Delta Dental Plan of West
Virginia
P.O. Box 728
Charleston, W. Va. 25323
Telephone: (304) 344-8602

Wisconsin Dental Service
P.O. Box 26
Stevens Point, Wis. 54481
Telephone: (715) 344-5230

Wyoming Dental Service
P.O. Box 2081
Cheyenne, Wyoming 82001
Telephone: (307) 632-3313

INACTIVE

Arizona Administrative Dental
Service Corp.
7777 North 43rd Ave.
Phoenix, Arizona 85021
Telephone: (602) 939-5001

Arkansas Dental Service Corp.
P.O. Box 337
Arkadelphia, Arkansas 71923
Telephone: (501) 246-7241

Dental Health Service Corp.
of the District of Columbia
1300 Massachusetts Ave. N.W.
Washington, D.C. 20005
Telephone: (202) 628-2177

Nebraska Dental Service Corp.
1835 E. Military Ave.
Fremont, Nebraska 68025
Telephone: (402) 721-5714

Delta Dental Plan of Nevada
917 North Mountain St.
Carson City, Nevada 89701
Telephone: (702) 882-4122

North Dakota Dental Service
Corp.
610 Gate City Bldg.
Fargo, North Dakota 58102
Telephone: (701) 235-1261

Dental Dental Plan of Oklahoma
629 Northwest Expressway
Oklahoma City, Oklahoma 73118
Telephone: (405) 848-8873

A GLOSSARY OF PEDODONTIC TERMINOLOGY

by

THE AMERICAN ACADEMY OF PEDODONTICS

DENTAL

ANALGESIA

Reduction of sensibility to pain usually achieved by administration (inhalation, intravenous) of a drug for that purpose.

ANKYLOSIS

A condition characterized (a) clinically by a tooth which is below the occlusal plane, may elicit a different sound in response to percussion and may show radiographic evidence of union between alveolar bone and root structure; (b) histologically by union between radicular dentin and invading alveolar bone.

ANOMALOUS TEETH

The use of this terminology has been adopted for the designation of errors in development which are associated with (1) number, (2) position and exchange of dentitions, (3) shape, and (4) texture.

APEXIFICATION

Therapeutic apical closure involving removal of nonvital radicular tissue just short of the developing apex, irrigation and the sealing in of a medicament for several months until some form of closure occurs. Successful treatment is characterized by a calcific barrier around or across the apex eliminating the foramen and permitting routine root canal filling.

AVULSION

The complete separation of a tooth from its alveolus. The term is most commonly used in reference to dental injuries resulting from acute trauma.

BITE, OPEN

A condition in which the anterior, or posterior mandibular teeth cannot be brought into the proper occlusal relation to the maxillary

BITE, OPEN (cont'd.)	dentition due to a dislocation of the temporomandibular articulation, a mandibular fracture, malunion of an old fracture, a deformity of either the alveolar processes of maxilla or mandible, or abnormal tongue habits.
BUCCAL	Pertaining to, or adjacent to, the cheek.
CEPHALOGRAM	A cephalometric roentgenogram. On tracings of these films anatomic points, planes and angles are drawn which assist in the evaluation of the patient's facial growth and development.
CEPHALOMETRICS	The scientific measurement of the bones of the cranium utilizing a fixed, reproducible position for the exposure of lateral skull roentgenograms. A scientific study of the measurements of the head using specific reference points.
CONCRESCENCE	A term to be used when there is no bifid crown, but rather a joining of the cementum of the roots of two teeth and appearance of a normal complement of teeth in the mouth.
CROSS BITE (SEE X-BITE)	
DENS INVAGINATUS	A developmental disturbance in tooth formation; the result of invagination of the epithelium associated with coronal development into the area which was destined to be the pulp space. After calcification there is an invagination of enamel and dentin into the pulp space and a distortion of this space and the root contour to accommodate this invagination.

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DENTAL DECALCIFICATION

Decalcification designates the disappearance of the inorganic material of enamel and dentin and the result of the process of decalcification is decalcified areas.

DENTAL EROSION

Erosion is the term used for a condition of unknown etiology which is characterized by the wearing away or loss of substance of a tooth upon surfaces free from attrition by mastication. The wearing away begins in the enamel and slowly spreads inward.

DENTAL PUBLIC HEALTH

To differentiate public health and preventive dentistry, it may be said that a large component of dental public health service is preventive dentistry applied to groups of the population through organized efforts of the community rather than to individuals by the private practitioner of dentistry.

DENTIN

The calcific tissue which lies subjacent to the enamel and cementum and which forms the body of the tooth.

primary dentin

Dentin produced during tooth formation having an organized pattern of tubules and cell processes.

reparative dentin (tertiary dentin)

Dentin produced in response to strong pulp irritation such as may be associated with caries invasion or injurious operative procedures. The dentin has no tubular pattern and often demonstrates cellular inclusions. The pattern of calcification is also often irregular.

secondary dentin	Dentin produced after completion of tooth formation and in response to noninjurious stimulation, such as attrition or mild operative procedures. The tubular pattern is regular but less frequent than that of primary dentin.
transparent dentin (sclerotic dentin)	Dentin in which the dentinal tubules are obliterated by deposits of calcium salts; so named because it appears transparent in ground sections.
DILACERATION	A distortion of the root or crown of a tooth resulting from an injury during tooth development. Through common usage, the term now includes teeth with sharply angulated and deformed roots. The latter may be the result of insufficient space for root development.
DISTAL	(1) Away from the median sagittal plane of the face following the curvature of the dental arch. (2) In a dorsal direction from any given point of reference.
FLUORIDATE and FLUORIDATION	Used to indicate the addition of any of the fluorides to water.
FLUORIDIZE and FLUORIDIZATION	The terms recommended to indicate the application of a fluoride to the teeth topically.
FORMOCRESOL	A mixture of a 19% solution of formaldehyde, 35% cresol plus glycerine and water. It is both a tissue fixative and a potent, nonspecific intracanal medicament. Used in endodontics for the fixation or mummification of vital pulps and their remnants.

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FRACTURE, TOOTH	A traumatic injury resulting in the loss of enamel only or enamel and dentin with or without exposure of the pulpal tissue and demanding immediate and appropriate treatment.
FRACTURE, ROOT	A traumatic injury resulting in separation of the root at its apical, middle or gingival third or at the cemento-enamel junction.
FUSION	Fusion results when two separate developing buds join together to form what appears to be a bifid crown and root which has two canals.
GEMINATION	A term to be used when there is a bifid crown, but one root canal, and the anomaly is to be counted as one tooth.
HABIT	A frequently repeated practice that may produce injury to the teeth, their attachment apparatus, the oral mucous membranes, the mandibular musculature, the temporomandibular articulation, etc. Oral habits include bruxism, clenching, clamping, tongue thrusting, lip biting, cheek biting, etc.
reminder	Any effective appliance for breaking pernicious oral habits.
HEADGEAR	The apparatus encircling the head or neck and providing attachment for an intraoral appliance in use of extraoral anchorage.
HEMATOMA	A localized accumulation of extravasated blood tissue. Occasionally it occurs after endodontic surgery or root canal hyperinstrumentation. It is manifested clinically by discoloration and sometimes by swelling

HEMATOMA (cont'd.)	of tissues. Hematomas gradually disappear as the blood is resorbed.
HERPES SIMPLEX	Infection caused by the virus herpes simplex. Primary infection, occurring most often in children between 2 and 5 years of age, may result in apparent clinical disease or such manifestations as acute herpetic gingivostomatitis, keratoconjunctivitis, vulvovaginitis, or encephalitis. Recurrent manifestations include herpes labialis (fever blisters or cold sores), dendritic corneal ulcers or genital herpes simplex.
HOMEOPLASTIC DENTIN	The formation of new dentin like that adjacent to it and normal to the part. (To replace the terms "reparative dentin" and "secondary dentin").
HYGIENE, ORAL	The practice of personal oral physiotherapy, the maintenance of a state of oral cleanliness and improved tissue tone by toothbrushing, tissue stimulation and massage, hydrotherapy, etc.
HYPERPLASIA, DILANTIN	An enlargement of the gingivae caused by the use of Dilantin sodium (diphenylhygantoïn sodium) in the treatment of epilepsy.
HYPERTROPHY	The morbid enlargement or overgrowth of an organ or part due to an increase in size of its constituent cells.
HYPOCALCIFICATION	Reduced calcification, especially of enamel. It produces opaque white spots which may be discolored later.

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HYPOPLASIA	Defective or incomplete development of any tissue.
INCISION AND DRAINAGE	The surgical procedure of incising a lesion to permit the removal of a liquid or fluid exudate.
INFRACCLUSION	Dental arches or groups of teeth in open-bite relationship. The position occupied by a tooth when it has failed to erupt sufficiently to the line of occlusion.
JACKSCREW	A threaded device used in appliances for separation or approximation of teeth or jaw segments.
LUXATION	The dislocation or displacement of, frequently used to refer to a tooth or the temporomandibular articulation.
MACROGNATHIA	Overgrowth of the maxilla and/or mandible.
MALOCCLUSION	Any deviation from a physiologically acceptable relationship of opposing teeth or dentitions.
MESIODENS	A supernumerary, or extra, tooth located in the midline of the anterior maxilla, between the maxillary central incisor teeth.
MICROGNATHIA (Retrognathia)	An underdevelopment of the mandible and/or maxilla as compared with the relative normal for that age.
MIGRATION	The movement of a tooth or teeth out of normal position, usually due to loss of supporting structure.

**NECROTIZING ULCERATIVE
GINGIVITIS**

An acute or chronic gingivitis characterized by ulceration and necrosis of the gingival margin and destruction of the interdental papillae.

**NEONATAL MAXILLARY
ORTHOPEDICS**

A form of stomato-orthopedics involving prosthetic therapy initiated immediately after birth for the purpose of positioning maxillary segments of cleft palate children into harmonious alignment prior to lip and palate surgery.

**NITROUS OXIDE-
OXYGEN SEDATION**

A form of psychosedation. (Synonyms: relative analgesia, dental analgesia).

OBTURATOR

A prosthetic device (full or partial denture) covering or filling an anomalous tissue opening. In cleft palate patients with a velopharyngeal deficiency an obturator serves as a speech aid device by occupying space in the naso-pharyngeal part which would remain open otherwise and permit loss of air through the nasal passages during speech. This plastic bulb enhances the ability of the patient to create sufficient oral pressure to produce consonant sounds adequately and with little or no hypernasality.

OCCLUSAL ANALYSIS

A systematic examination of the masticatory system with special consideration of the effect of tooth occlusions on the teeth themselves and on their related structures.

OCCLUSAL GUARD

A removable dental appliance usually constructed of plastic that covers one or both dental arches designed to minimize the damaging effects of bruxism and other occlusal habits.

OCCLUSION (ANGLE'S CLASSIFICATION)

Class I The arches are in normal mesio-distal relations when the mesio-buccal cusp of the maxillary first permanent molar coincides with the buccal groove of the mandibular first permanent molar.

Class II The mandibular arch is distal to the normal relations with the maxillary arch.

Division 1 The mandibular arch is bilaterally distal with protrusion of the maxillary incisor teeth.

Division 2 The mandibular arch is bilaterally distal with retrusion of the maxillary incisor teeth.

Subdivision The mandibular arch is unilaterally distal with retrusion of the maxillary incisor teeth.

Class III The mandibular arch is mesial to the normal relations with the maxillary arch.

Division The mandibular arch is bilaterally mesial.

Subdivision The mandibular arch is unilaterally mesial.

ODONTOMA A tumor composed of differentiated cells of the tooth germ that lay down tooth substance in an abnormal pattern.

compound odontoma An odontoma in which structures reminiscent of tooth structure can be easily identified.

complex odontoma	An odontoma in which a haphazard conglomeration of dentin, enamel, enamel matrix, cementum and areas of pulp tissue is found.
cystic odontoma	An odontoma in which a cystic structure is associated with the tumor.
ORAL HABIT	A frequently repeated practice that may produce injury to teeth, their attachments, the temporomandibular musculature, etc. Oral habits may include bruxism, tongue thrusting, lip, cheek or hard object biting.
ORTHODONTICS, CORRECTIVE	Designates the ultimate clinical approach when skeletal, dental or muscular disharmony is so severe that therapy with comprehensive appliances is necessary to improve the dentition.
ORTHODONTICS, INTERCEPTIVE	Designates the treatment of malocclusion in which growth or eruptive forces or both may be utilized constructively to accomplish improved relationships of the teeth and arches.
ORTHODONTICS, PREVENTIVE	Designates the treatment which is utilized in instances of normal occlusion when untoward environmental forces are operating and threaten the integrity of the occlusion.
ORTHOPANTOGRAPH (PANOREX)	A panoramic radiographic device which permits visualization of the entire dentition, alveolar bone, and other contiguous structures on a single extra-oral film.
OVERBITE (VERTICAL OVERLAP)	The extension of the maxillary teeth over the mandibular teeth in a vertical direction when the opposing posterior teeth are in contact.

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OVERJET (HORIZONTAL OVERLAP)	The projection of the maxillary anterior and/or posterior teeth beyond their antagonists in a horizontal direction.
PASSAVANT'S PAD, BAR, RIDGE	(1) The bulging "cross roll" of the posterior pharyngeal wall produced by the upper portion of the superior pharyngeal constrictor during the act of swallowing or during vocal effort. (2) A ridge of erectile tissue on the posterior wall of the pharynx.
PERICEMENTITIS	Inflammation of the tissues adjacent to the tooth root.
PERICORONITIS	An acute inflammation of the gingivae surrounding partially erupted teeth.
PERIODONTAL abscess	A localized area of acute or chronic inflammation with pus formation found in the gingiva, periodontal pockets or periodontal membrane.
bleeding	The flowing of blood from the marginal gingival area (particularly the sulcus), seen in such conditions as gingivitis marginal periodontitis, injury, ascorbic acid deficiency, etc. Bleeding may be spontaneous or may result from the mild stimuli of toothbrushing, coarse food, etc.
disease	Those pathologic processes affecting the periodontium (the supporting apparatus of the teeth), most often gingivitis and periodontitis.
ligament	The tissue that surrounds the roots of a tooth and attaches it to its bone socket.

pocket	A space bordered on one side by the tooth and on the opposite side by ulcerated crevicular epithelium and limited at its apex by the epithelial attachment.
PHONETIC VALUES	The character of quality of vocal sounds.
PLAQUE	A sticky substance composed of mucoid secretions containing bacteria and their products, dead tissue cells and debris. When this toxic substance accumulates on the teeth, it is considered to be an initiating factor in gingival inflammation.
PREMEDICATE	Administration of drugs before treatment to enhance the effect and safety of a given procedure.
PREOPERATIVE RECORDS	Any record or records for the purpose of study or treatment planning.
PREVENTIVE DENTISTRY	Preventive dentistry consists of the various educational procedures used by dentists, dental hygienists, physicians, nurses, teachers, and others, which will develop scientific oral health knowledges and habits and will prevent the development of improper oral health knowledges and habits; it consists of those technics which will prevent the initiation of oral diseases or conditions such as dental caries, diseases of the supporting structures of teeth, and nonhereditary malocclusion; and it includes the prevention of such sequelae of the neglect of these conditions as oral and systemic infections, interferences with normal growth and development of the arches, loss of

DENTAL

PREVENTIVE DENTISTRY (cont'd.)	masticatory function and impairment of the personal appearance or the social adjustment of the individual.
PREVENTIVE TREATMENT	Those procedures performed at intervals by the dentist or his auxiliaries that assist the periodontal patient in maintaining his dental health. These appointments usually consist of brief examination for new findings, a check on effectiveness of daily oral hygiene (re-instructing where necessary), scaling in and around the sulcus, and polishing the teeth if necessary. (Routine dental prophylaxis will seldom suffice for the management of this kind of problem.)
PROGNATHISM	The marked forward projection of the mandible, or maxilla, beyond a normal distance from the cranial base.
PROPHYLAXIS, ORAL	The removal of calculus and stains from the exposed and unexposed surfaces of the teeth by scaling and polishing as a preventive measure for the control of local irritational factors.
PROSTHESIS	The replacement of an absent part of the human body by an artificial part.
cleft palate prosthesis	An appliance to correct congenitally acquired defects in the palate and related structures if they are involved.
postsurgical prosthesis	An artificial replacement of a missing part or parts after operation.

surgical prosthesis	An appliance prepared to assist in surgical procedures.
temporary prosthesis	A fixed or removable restoration replacement of which, with a more permanent appliance, is planned within a short period of time.
PSYCHOSEDATION	Any form of chemotherapy which produces an alteration of mood without loss of consciousness or ability to respond to verbal directions.
PULP	The connective tissue composed mainly of blood vessels and nerves which is contained within the pulp chamber and root canal of a tooth.
PULPOTOMY	The surgical removal (amputation) of the entire pulp contents of the coronal portion of a <u>vital</u> tooth, to the entrance of the root canal (canals) leaving the tissue in the canal (canals) intact.
PULP TREATMENT DIRECT	The application of a medicament or agent over an operative exposure (usually small) of the pulp, so that there is direct contact between the medicament or agent and pulp tissue. (Direct Pulp Cap.)
PULP TREATMENT INDIRECT	A small amount of carious dentin is permitted to remain in the deep areas of the cavity of a tooth to avoid exposure to the pulp and a medicament or agent sealed therein to stimulate and encourage pulp recovery. It is understood that the carious material will be removed at a subsequent time and the tooth restored. (Indirect Pulp Cap.)

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PYOGENIC GRANULOMA	An exuberant response of tissues to a nonspecific infection, exhibiting a soft, elevated, pedunculated or sessile mass, deep red or reddish purple, which is commonly ulcerated and shows hemorrhagic tendencies.
RANULA (MUCOCELE)	A large mucocele of the floor of the mouth; usually due to injury and concomitant obstruction of the duct, or ducts, of the sublingual salivary glands.
REMINERALIZATION	A physiologic process within hard tissues in which mineral elements are restored to organic matrices. (A term suggested as being preferable to "recalcification"). It is recommended that this term should not signify a specific dental treatment procedure but rather a process which may occur in enamel and/or dentin under homeostatic conditions or as the result of treatment.
REPLANT	To reinsert a tooth into the alveolar socket from which it has been displaced (avulsed).
RESORPTION	A loss of substance from tissues which normally are calcified such as the dentin or cementum of teeth and alveolar bone. The condition may be associated with either a physiologic or pathologic process.
bone resorption	A type of bone loss due to osteoclastic activity.
idiopathic resorption	Resorption of calcified tissues without apparent cause.
internal resorption	A type of tooth resorption which originates within the pulp cavity.

root resorption	A type of resorption in which cementum and/or dentin is removed from the roots of teeth. Depending on the site of origin, the condition may be qualified as internal or external root resorption.
RETROGNATHISM	Facial disharmony in which one or both jaws are posterior to normal facial relationships.
Pierre-Robin's Syndrome	Micrognathia and glossoptosis with associated cleft palate and possible eye defects.
RETROMOLAR PAD	A mass of tissue, frequently pear-shaped, which is located at the distal termination of the mandibular residual ridge.
RETRUSION	(1) Retraction of the mandible from any given point. (2) The backward movement of the mandible.
ROENTGENOGRAPHIC VIEWS, TYPES OF:	
Bregma-Menton	See Sub-Mental Vertex
Cephalogram	A roentgenographic view of the jaws and skull on which anatomic points, planes and angles are drawn to assist in the evaluation of the patient's facial growth and development.
Lateral Oblique	A roentgenographic view of the mandible that (unilaterally) reveals the mandible from symphysis to condyle.
Lateral Ramus	A roentgenographic view of the mandibular ramus and condyle.

DENTAL

Lateral Skull	A roentgenographic view of the sinuses and lateral aspects of the skeletal structures of the cranium.
Maxillary Sinus	A roentgenographic view of the maxillary sinuses and the zygomas that enables direct comparison of the sides.
Sialogram	A roentgenogram made of the ductal system of a salivary gland following the instillation of a radiopaque fluid into the major duct to determine the presence or absence of calcareous deposits or the presence of other pathologic entities.
Sub-mental Vertex	A roentgenographic view used to visualize lateral movements of the condyle and/or coronoid process, and the contour of the zygomatic arches.
Towne Projection	A roentgenographic view of the mandibular condyles and the midfacial skeleton.
Transcranial	A roentgenographic view of the temporomandibular articulation.
SOLUTION, DISCLOSING	A topically applied substance used in aqueous solution to stain and reveal, to both the operator and the patient, the extent of calcareous and mucinous deposition to the teeth. An excellent disclosing solution is 1.9 percent basic fuchsin, 4 minims in 2 ounces H ₂ O, as a rinse, though some question as to its carcinogenic properties has been raised.
SPACE	A delimited, three-dimensional region.

interproximal space	The space between adjacent teeth in a dental arch. It is divided into the embrasure occlusal to the contact point and the septal space gingiva to the contact point.
interradicular space	The area between the roots of a multirrooted tooth, occupied by bony septum and the periodontal membrane.
space maintainer	A fixed or removable appliance designed to preserve the space created by the premature loss of a tooth. An appliance that maintains a space. Also, an appliance that creates space by means of moving teeth apart while holding that space secured.
space obtainer	An appliance used to increase the space between two teeth.
orthodontic type of space maintainer	A space maintainer for preserving space for premolars. Orthodontic bands are used for anchorage when primary molars are lost prematurely.
space regainer	A fixed or removable appliance capable of moving a displaced tooth (teeth) into its proper position in the dental arch.
SPEECH AID	Therapy or appliance to improve speech.
prosthetic speech aid	An appliance used to close a cleft in the hard or soft palate or both, or to replace lost tissue necessary for the production of good speech.
SPLINT(S)	Metal, acrylic resin, or modeling compound fashioned to retain in position teeth that may have been replanted, are removable or have fractured roots.

STOMATITIS	Inflammation of the oral cavity. This is used as a general term and for all practical purposes is synonymous with mucositis when applied to oral regions. Glossitis and gingivitis are more limiting terms, although essentially they are stomatides.
SWALLOWING THRESHOLD	(1) The moment the act of swallowing begins after the mastication of food. (2) The critical moment of reflex action initiated by minimum stimulation, prior to the act of deglutition.
TEETHING	The emergence and eruption of the primary teeth into the oral cavity.
TEST, PULP	A diagnostic test to determine pulp vitality or pulp abnormality, usually by means of electric pulp testers or by application of a hot or cold stimulus.
THRUSH	A disease caused by <i>Candida albicans</i> and characterized by white patches which scrape off with some difficulty, leaving bleeding bases. This term usually is used for the intraoral disease, whereas moniliasis is the term applied to the condition in other areas of infection by the yeast, as well as to the oral cavity.
TONGUE THRUST	Pressing the tongue against or between the maxillary and mandibular teeth as a habit pattern.
TRACT, SINUS	A communication between a pathologic space and an anatomic body cavity or between a pathologic space and the skin. A sinus tract may or may not be lined with epithelium.

TRANQUILIZER	A calming agent that reduces anxiety and tension without depressing mental or motor functions.
TRANSILLUMINATION	The passage of a beam of light through a tooth or other tissue for diagnostic purposes.
TRANSPLANT	The transfer of a tooth from one alveolus (socket) to another.
homogenous transplant	The transplantation of a tooth from one human to another.
autogenous transplant	The transplantation of a tooth from one position to another in the same individual.
TREATMENT PLAN	The sequence of procedures planned for the treatment of a patient.
TRIFURCATION	The area where the tooth roots divide into three distinct portions.
TRIFURCATION INVOLVEMENT	The extension of pocket formation into a trifurcation area.
TRISMUS	Inability to open the mouth due to spasms of the muscles of mastication.
WIRE	A circular, flexible metal structure.
arch	A wire shaped to lie along the labial or lingual side of the dental arch; used in applying orthodontic force.
ligature	A soft, thin wire used to tie an archwire to the band attachments.
orthodontic	Stainless steel and wrought gold wire of various dimensions used in orthodontic treatment.

DENTAL

separating

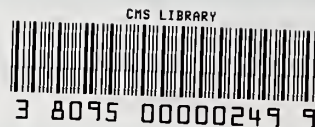
Wires threaded interproximally between two adjacent teeth and tightened by twisting the ends together so as to wedge the teeth apart slightly. Used preparatory to adapting bands to teeth having tight contacts with adjacent teeth.

X-BITE

A malrelation of teeth in which the buccal cusps of the mandibular and/or molars occlude buccal to the buccal cusps of the maxillary posterior teeth and/or the maxillary anterior teeth occlude lingual to the mandibular anterior teeth.

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